An inaugural dissertation on the disease
termed

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Cholera Infantum

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Cholera Infantum

Amid the several disorders which attack mankind in passing from infancy to decrepitude, there is none perhaps which presents stronger claims to our attention than the subject of the following Essay.

The peculiarly interesting period of attack, and the manifest alarming symptoms which characterize Cholera Infantum, have engaged a large portion of professional attention and caused it to be classed with the most dangerous affections incident to childhood; its march is rapid, and traces of its severe afflictions and widely spread desolations are annually apparent.

I conceive it unnecessary to attempt any further demonstration of its importance, as I feel confident that it will be admitted by all who have witnessed cases of it; or will reflect on the tender part of our species on which it exclu-

sively delights to prey. incapable from the delicacy of their frames, and weakness of their constitutions, successfully to combat the depressing influence of any morbid action. A full and perfect acquaintance with a disease so frequent and so formidable, and which from its fatality strikes so directly to the root of domestic happiness, often nipping in the bud the expanded hopes, and the bright but illusive anticipations of fond and devoted parents, must be obvious to every practitioner, more especially to those who are just entering upon the **Arena of their profession**—

In making this malady the particular subject of my consideration, I have not been flattered with the hope of being able to advance any thing new or original, either as to its pathology or proper method of cure, nor am I so far a lover of novelty as to grasp at any new hypothesis, or indulge in idle speculations, which are not calculated to add to the essential utility of Medical Science, to soothe the afflictions, or to extend the comforts of my fellow creatures; but I foster the belief that if I have succeeded in my effort to give a detail of the experience of others, and to exhibit in a form as concise as possible, the testimony of those whose writings

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afford interesting information on this important malady, I have not laboured in vain on the score of Utility, whilst endeavouring to comply with the requisitions of our University.

Cholera Infantum or as it is commonly designated amongst us the Vomiting and purging of children, which from the regularity of its appearance in the summer months is likewise known by the name of the Summer complaint of Children, is a modification of the Cholera and remittent fever of adults; the distinction implied by the word Infantum is of modern date; it is not used by Boerhave, Cullen, Sydenham nor Cleghorn, The two last authors mention children being affected by Cholera Morbus, Boerhave in his aphorisms, nor Cullen in his first lines, do not mention children at all in their account of Cholera, from this it is evident that they intended to include the Vomiting and Purging of Children under the general title of Cholera Morbus. This disease makes its appearance sooner or later, according to the season and section of the Country in which it is found, With us it seldom shews itself before the Middle of June or the first of July,

and continues throughout the summer months occasionally, not ceasing its ravages before the cooler days of Autumn or the frosty months of September, and October, its frequency and danger being usually proportionate to the heat of the weather. It affects children from the first or second week after birth, until their second year, but most commonly seizes upon them from the age of five, to that of eighteen or twenty months, occurring rarely in country places, (except such as are favourable to the production of Autumnal fevers) or thinly settled villages. It seems almost to be exclusively appropriated to Towns and Cities.

The children of the poorer classes of society, who live in confined and ill-ventilated houses exposed to the destructive effects of improper diet, and clothing, suffer most, It is, however, by no means confined to this class of persons, for so general and pervading is its influence, that those children who enjoy the advantages of large cool houses, of comfortable clothing, of cleanliness and of a wholesome and well regulated diet, can only be said to be less exposed.

Considering the causes of this disease I shall merely divide them into the remote or predisposing, and exciting or

[illegible]

[illegible]

[illegible]

[illegible] in his place. What is [illegible] complete [illegible] [illegible] [illegible]

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[illegible]

[illegible]

ation, which exists between the external surface and some of the most important viscera of the human structure. Their action will at once appear obvious, as has been clearly demonstrated by most accurate experiment, and as Dr. Johnson says universally admitted, "that no impression can be made on the one, without some influence a most immediately extended to the other." When we see the manner in the year that Cholera Infantum prevails, been not only remarkable for its with rise of atmospheric temperature, as for the certain vacillations from heat to cold especially in the evenings, another exciting cause of common occurrence worthy of our attention may, in the extent, viz. improprieties in Clothing, which from the fashionable notion of mothers sacrificing the ease and comfort of the child to taste and elegance, [illegible] tight and [illegible] [illegible] lower part of their arms, neck and [illegible].

[illegible] the exciting causes of acute authors have enumerated such as Teething, Worms, Early learning &c. Which these causes are now regarded as exerting little influence in the production of Cholera, yet it would not be amiss for me to have in the first, I mean Congestion – or precipitate

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] paid to these circumstances [illegible] symptoms [illegible] [illegible] [illegible] matter [illegible] [illegible] sediment. I [illegible] by a [illegible] [illegible] continues [illegible] these symptoms [illegible] [illegible] yet [illegible] rapid [illegible] [illegible], the [illegible] [illegible] on the evacuation of the [illegible] mixed with mucus [illegible]. When the disease [illegible] [illegible] and sometimes [illegible] [illegible] [illegible] [illegible] [illegible]; but [illegible] by no means [illegible] [illegible].— [illegible] evacuations [illegible] streaked with blood [illegible], soon the quantity of [illegible] [illegible] and [illegible] increase. [illegible]

[illegible] the [illegible] [illegible] [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

and pulse [illegible] respiration [illegible] appear [illegible] &c. the eyes [illegible] sight, nose sharp and lips shrivelled, with a strongly marked Hippocratic countenance the almost certain mark of the hand of death. Such is the picture of this formidable disease when it runs its full course; and even under such circumstances when immediate depletion would seem to be denied, yet life [illegible] and recovery ultimately takes place.

Dissections clearly [illegible] of the nature and seat of Cholera Infantum. The principal and most usual phenomena that present themselves to our notice in Post Mortem examinations, are lesions more or less extensive in the digestive system, and its appendages: Occasionally, however, the effects of previous inflammation may be traced throughout the whole of the alimentary canal, though it is confined most generally to the mucous membrane; dark livid spots are dispersed over the canal of the stomach and small intestines, particularly the duodenum near the pylorus. Nature sometimes attempts to relieve herself by throwing out coagulable lymph.

which is sometimes found strewed on their surface in detached masses; in most cases, sometimes the calibre of the tube is considerably reduced. The large intestines are usually involved, and often the disease assumes the Dysenteric form.

Now and then a jaundice similar to that in intermittent fever though of less extent, may be seen in some cases.

The Urinary System also claims attention. The urine under nearly all circumstances, especially in cases of long standing is found unaltered in structure, though greatly enlarged in its dimensions, and invariably must be in a state of engorged with blood. The gall bladder is commonly filled with dark green and sometimes with colourless bile; in cases where the abdomen is usually healthy; neither the thorax is seldom affected. In recent cases, the brain vessels are marked with some degree of congestion, but in those of a chronic character, considerable effusion may take place, including hydrocephalus internus.

Having now taken a brief view of the causes, symptoms and pathological phenomena exhibited in dysentery in this unusual disease, I shall proceed to make a few observations

to Pathology. This subject though of much importance is too vast to be embraced in the narrow limits of an Inaugural Dissertation. I shall therefore only in a general way give some account of its history without descending into detail.

It is well known the several functions of digestion are carried on by organs whose actions are regulated accordant and co-operative by means of a nervous connection subsisting between them, which has been denominated sympathy, and it is by the agency of this sympathetic union that the quantity of fluid secreted, and the period of their secretions are adjusted. The food when taken into the mouth excites these, by its own stimulus, the action of the salivary glands, and it is by the same direct stimulus that the glands secreting the fluids of the stomach are affected. But as the liver and pancreas lie out of the reach of direct stimulation they must be excited into action by an indirect impulse communicated from the stomach.

Now it is evident if any one of these functions become deranged it is liable to throw the rest

of the stomach disorder, as the stomach may be disordered in consequence of a cause directly opposite, or may induce a corresponding derangement in the liver and may be more easily moved in the same proportion, from a constant or common cause than other organs. In general the liver is more sympathetic and stomach more sympathetic with the other organs, and it is in a better manner to say in some cases than in others." Bei gleicher Consideration der Ursachen, Symptome und Causes of disease etc. etc. kommt das Resultat heraus: daß die primary affection is confined to the stomach: bei mir ist secondary & that it first begins in the alimentary canal, soon commencing to the secondary organs.

When the stimulus of the cholera was induced, it was moderately, and the immediate consequence was an increased secretion of the liver and a consequent secretion of bile is the result, as I have said, sometimes seen in the early stage of fever, and in the

stimulus is once continued, as is from the beginning expected, the secretory action instead of being increased is diminished, or completely arrested. This is remarkable in the subsequent stage, when the dejections uniformly indicate all recovery is lost, under these circumstances the blood sent to the liver, the rest of the total circulation to supply the pabulum of its secretion, finding no outlet-becomes of course obstructed, and a congestion of its branches, is the necessary consequence." This constitutes the Apoplectic or congested condition of the liver which is always found in post mortem examinations. Such the state of things, we indicated it is that this disease consists of.

Among the various Dysentaric affections the liver is intimately connected, there is none more remarkable than that in which the brain is concerned. It has been very in to be explained the impression made upon that organ causing in it inflammation and as a necessary consequence hydropic effusion, constituting what was often be found in neglected cases of Hydrocephalus Internus.—)

It is the most remarkable feature in

[illegible] Pathology and theories of medicine, that diseases are estimated not so much by their form and accidental phenomena [illegible] their [illegible], [illegible] and causes, as by their examination to certain leading characters of morbid condition [illegible] [illegible] [illegible] in any [illegible] [illegible] the [illegible] circulation [illegible] [illegible] &c. and considering the [illegible] circumstan[illegible] [illegible] which may vary their energy, or modify their action, reasons upon the most just and general relations of [illegible] these things, and makes a fair conclusion as to the intimate nature of the complaint; and it is to this abstract deduction, this inference that he directs his aim.

The same simplicity which marks all pathological principles extends to our opinions concerning [illegible] medical agency. Remedies are not now so much separated into different families, according to the various departments of the [illegible]ly to which they are destined, or according to the select disea[illegible]

[illegible] which they were once supposed to act, by some direct force or affinity; but they are used indifferently to controul the functions, to set up new actions, and to evoke the vital energy, by the instrumentality of which alone, vigour and well being are [illegible].

Since writing these Brief of the Pathology of this disease, I am indebted to Dr. Horner for some novel opinions on the subject and take a pleasure in presenting them in this place.

The Doctor believing that the prevailing notions of the pathology of Cholera Infantum are by no means settled, [illegible] induced to look to some other organ save the stomach and liver as the fountain head from whence flowed all that train of symptoms constituting the disease: whilst engaged in prosecuting his investigations I had the pleasure of witnessing an autopsic examination which he made at the Philad. Alms House during the month of August last, the case was a child of about 3 months old, who had laboured under the usual symptoms of Cholera of about 10 days duration; besides the appearances which commonly present themselves in these examinations, upon opening the large intestine he

colon was found filled with pure pus of a cream colour, and the muciperous glands which cover its inner surface, in a state of extreme follicular inflammation, this inflammation extending up the canal to the small intestines; but here its violence was much mitigated. The preparation of this case is now in the Wistar Museum marked A 102.10, which shews most fully since maceration, the diseased appearance of these little glands.

Besides the case above alluded to, the Doctor has placed in the Museum preparations from several similar cases, shewing the inflammation in the mucipersous glands or follicles, from the slight blush of simple erythema confined to the colon where the disease was of short duration, up to the more advanced stages of follicular inflammation where the disease was of longer standing, here in some cases confining its limits to the large intestines, but in others extending the whole tract of the alimentary canal; from these and many similar cases which the Doctors extensive opportunities have afforded to him, he is induced to believe that [illegible]

[illegible] to be [illegible] [illegible] [illegible]

ed either alone, or in combination with a small quantity of laudanum, appears to answer well in the milder forms of the disease. But so delicate, in some cases are the effects of the gastric irritability, that it is impossible to get such medicines to be retained sufficiently long to produce their desired effects; here we are under the necessity of resorting, at once, to such means as are calculated to allay the irritation, as lime water with milk, a strong infusion of coffee with sal sugar or cream, a solution of the bi-carbonate of potassa, adding a few drops of laudanum or paregoric elixir, seltzer water, lemonade, and [illegible] cases after other means have failed, a few leeches applied to the epigastrium have been attended with most happy effects. The remedy on which most is to be relied, is calomel given in minute doses, as the 1/2, 1/4, 1/8, or even the 1/16 of a grain every hour, or half hour, as recommended by Dr. Curry. Having succeeded in calming the gastric irritability we must now have recourse to the evacuation of the bowels by means of purgatives; for this purpose Castor Oil, magnesia or [illegible] is most to be relied on, as calomel in [illegible]

[illegible] more effectual in allaying and reason when [illegible] and also more liable to be relapsed on the alimentary [illegible] the commencement of [illegible] disease, if there be much febrile excitement and especially if the child be of a plethoric habit, venesection is demanded in order to prevent the fever and vital circulation [illegible] by obviating a tendency to inflammation in other important organs, as the brain &c &c. We thus prepare the way for the [illegible] and [illegible] effectual operation of other remedies. Nevertheless the lancet must be "operated with judgment, and tempered with discretion"; topical venesection or the application of leeches on the stomach has been found productive of the most signal benefit.

The practice above laid down will not be found attended with [illegible], for says Professor Chapman "When there are best [illegible] marked irritability and vomiting, great pain and the [illegible] and a much irritable pulse, it becomes necessary [illegible] medicine" — which has been further corroborated by a table [illegible]

Doctor Cartwright in sketching [illegible] [illegible] [illegible] [illegible] [illegible] together with the [illegible] symptoms [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] system [illegible] &c. [illegible] [illegible] and [illegible] [illegible] stage, [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] the [illegible] system, and the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] which the [illegible] [illegible] the [illegible], but [illegible] him [illegible] [illegible] [illegible] [illegible] [illegible] of the skin, [illegible] [illegible] [illegible] and [illegible] [illegible] [illegible] [illegible] [illegible]." [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] they [illegible] the [illegible], [illegible] [illegible] the commencement [illegible] of [illegible] [illegible] [illegible] [illegible] [illegible] found [illegible] [illegible] [illegible] [illegible] [illegible] them [illegible] [illegible] [illegible] the [illegible] of the [illegible] [illegible] [illegible] [illegible] [illegible].

[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] adapted to [illegible] [illegible]

-cury contributes to the cure of each case of this disease and the con- [illegible] [illegible] mercury precludes a cure at once radical du-rable and complete" — such was the language of the late Pro-fessor Miller, as I have quoted from his Practique of Medi-cine, but as ulceration tends to engorgement of the hepatic apparatus still continues at our interference must be consider as ulcerations; [illegible] shall be stated at the time as which the root remains untouched? 2nd, Inspissated by [illegible] [illegible] the hardened action of the [illegible] [illegible] the congested state of that organ. Calomel by its specific action on the hepatic system would "to break the force of engorgement, the biliary secretion [illegible] increased and of [illegible], [illegible] How to obtain the result of these properties so that what in this case is desirable, [illegible] [illegible] [illegible] [illegible] until [illegible] of the gland to restore its healthy action, and thereby not only remove [illegible] [illegible] but alter the diseased composition of the external [illegible] depending upon its derangement; the effects of Mercury are not to be considered [illegible] [illegible] [illegible] [illegible] -ality, but by means [illegible] [illegible] [illegible] specific action, and

[illegible] with instability. [illegible] Knowledge in cases so secluded. [illegible] alterative effect [illegible] the stew, [illegible] precautions, and opium [illegible] act to procure bilious stools, the [illegible] things; to calm irritation, and [illegible] determined [illegible] act. I seen these two or three bilious stools [illegible] and the heat abating and the skin [illegible] cool, has symptoms [illegible] be [illegible] [illegible] relieve [illegible] be followed up [illegible] [illegible] destroy the [illegible] [illegible] [illegible] occur, as [illegible] of heat [illegible] the discharge of [illegible] from the bowels the [illegible] should be [illegible] [illegible] [illegible] [illegible] gentle laxative. Until this

[illegible] has been [illegible] the [illegible] may be [illegible] The [illegible] may [illegible] the [illegible] elementary [illegible] and an important remedy to soothe irritability; [illegible] be impregnated with Common Salt, [illegible] method &c

During the continuance of this [illegible] as a necessary consequence repeated even [illegible] bedmatter in [illegible]; [illegible] could but [illegible] the [illegible] employed, [illegible] they should [illegible], [illegible] accomplished [illegible] Castor Oil [illegible] the former use [illegible] purgatives might be [illegible] already to be [illegible], [illegible] carefully avoided.

Calomel [illegible] some [illegible]

and [illegible] to [illegible] in the [illegible]
& dysentery, marked by much fever, hard [illegible] pulse, and
tenesmus; here we must not lose sight of the [illegible] of
the inflammation, venesections demanded, if not by
topical bleeding, for this leeches are [illegible] and
in some cases supersede the use of general depletion, with the
occasional use of cold barley water enemata; [illegible]
& thus lead the addition of a little opium. Here the [illegible]
of the disease that determinations to the head [illegible] and spt
a [illegible] place, should this be the case, [illegible]
depletions to have been premised, we next see [illegible]
applications; apply cold to the head and [illegible] to the
nape of the neck, with sinapisms on the soles; the [illegible] the
stomach prepared much good will be derived from a mercu-
rial purge; the repetition of which will depend on the [illegible]
[illegible] of the above [illegible]

As acidity is a common symp-
tom in this complaint, so alkaline and absorbent medicines are
necessary. Minute doses of magnesia vitae, or a solution of a

cash of either of the fixed alkalies will be found useful in
acids. Blisters are invaluable at any stage of the disease
and should be applied over the chest, abdomen, or extremities,
according to the state of the case, and the most urgent in-
dications. Opium allay the excessive and almost intolerable thirst
more or less present in every instance, and copious drinks,
even in small quantities at a time, and repeated.

When the tongue is pale the pulse
is feeble and small, the skin cold, tremulous and
tremulous, the lactacious and cutaneous pulse are necessary
with the cut and common injections or the latter
stimulating injections of gruel with some tanda-
rum are required, and to be repeated, if
the pulse and colon continue to be very the symptoms
indicating secretion from in a high

The sugar of lead is a remedy in
most affections of the bowels, combined with a small dose
of ipecacuanha wine. It is desirable to avoid the use of
opiates or in a quantity with a tonic, which is

effect a removal of pain, relieve tormina &c. and has been much used in this complaint, particularly when the bowels are very irritable attended with frequent bloody stools.

Cholera sometimes rises into the nature of a colliquative diarrhœa, arising from mere relaxation, or debility; in this case, stimulants are generally employed & [illegible] a solution of the class of medicines: secret. [illegible] ourselves [illegible] there is no inflammation or hepatic congestion existing, the astringents of common use are, creta prep and tinct kino, alum, catechu, galls, logwood, copperas, geranium maculatum, saccharum saturni, &c &c. But what is preferable is an infusion of the dew or blackberry root, decoction of the pomegranate bark, or as used by Dr Physick, an infusion of the dogwood bark; with most of these, laudanum will be found a valuable addition, terebinthinate prep^n and common resin [illegible] effectual in [illegible] the mucous membrane.

[illegible] and a flannel shirt well [illegible] with due attention to cleanliness [illegible] Dr Chapman [illegible]

[illegible] men [illegible] [illegible] [illegible]

to its ravages, so long as the child continues exposed to the operation of the causes which were instrumental in its production. Attention therefore should early be paid to a removal to the country as the only sovereign remedy. When the convenience of a country residence cannot be obtained, evident advantage has been derived from frequent changes of air, as taking the child out of the city one or two days, by frequently crossing a river in an open boat or riding out in an open carriage; Dr Chapman condemns this practice during the height of the disease. and thinks a removal to the country at this particular time would be of no benefit but highly recommends it during convalescence.

Considering it as the office of the physician, not only to devise remedies for the ever varying forms of diseases already established, but also to trace back to their source the springs of evil, and prevent their further flow; with these views I shall mention by way of conclusion the measures which common experience has found the best Prophylaxis to this complaint.

1st. Never permit the child to be weaned within the year, as no food

is so salutary as the natural milk.

2nd Let the cold bath be daily employed, used in the morning, but with care not to use it immediately upon the child's rising from bed when in a perspiration, care also that there be no efflorescence on the skin.

3rd Attention to the dress of children, direct the wearing of flannel next to the skin and worsted stockings.

4th Attention to diet. The proper food for an infant within the year, is its mothers milk, but if weaned should be fed on milk and on farinaceous substances boiled, after a few months, provided it has teeth, a small portion of salted animal food should occasionally be allowed.

5th During dentition, the teeth should be frequently examined if swelled or inflamed lance the gums.

6th Attention to cleanliness.

7th Let the child above all be removed to the country on the approach of warm weather.

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